Esperanza Energy Evaluating Southern California Offshore LNG Receiving Terminal Assembles Best-In-Class Team of Industry and Environmental Experts to Aid Design and Siting Evaluation Process

LONG BEACH, Calif., April 4 /PRNewswire-FirstCall/ -- Esperanza Energy LLC, a newly formed subsidiary of Tidelands Oil & Gas Corporation (OTC Bulletin Board: TIDE), announced today that the company is evaluating the feasibility of developing an offshore, deep-water Southern California liquefied natural gas (LNG) receiving terminal. Although a specific site off the Southern California coast has not been determined at present, the company is focusing its evaluation on several potential sites up to 12 miles offshore of the greater Long Beach area.

"Our goal is to develop a LNG import terminal that can play an important role in meeting California's growing energy needs by providing competitively priced natural gas to supplement that which is currently transported into the state by long-distance pipelines," stated Esperanza Energy President, Michael Ward. Mr. Ward further stated, "Esperanza will only pursue this project if it can be sited, designed and operated in the safest, most environmentally responsible and economically viable manner possible. Our goal is not to just meet the environmental, public health and safety requirements, but to exceed them."

Esperanza Energy is initiating a project feasibility study with the assistance of best-in-class LNG, environmental, pipeline and legal experts that include:

\* David Maul, former manager of the California Energy Commission's Natural

### Gas Office;

- \* ENTRIX, Inc., a professional environmental consulting company specializing in environmental permitting and compliance for major offshore oil and gas projects in California and the United States (http://www.entrix.com);
- \* Project Consulting Services, Inc., a leader in engineering, construction, management and inspection of onshore and offshore pipelines (http://www.projectconsulting.com);
- \* Pillsbury Winthrop Shaw Pittman, LLP, an interdisciplinary law firm with leading practices in environmental, land use and energy legal advice and in project development and finance (http://www.pillsburylaw.com).

"As the former head of the California Energy Commission's Natural Gas

4/4/2006

Office, I'm intimately familiar with every LNG project on the West Coast," stated David Maul, President of Maul Energy Advisors. "I chose to work with Esperanza Energy because of the company's strong commitment to design and build a LNG project that is responsive to California's unique environmental and regulatory sensitivities."

"Our preliminary analysis suggests that a site offshore of the Long Beach area would offer considerable benefits to California residents with the greatest respect for environmental and safety issues," added Mr. Maul. "Before selecting a specific site for developmental consideration, we will confer with key local, regional and state stakeholders."

About Esperanza Energy LLC

Esperanza Energy LLC, is a wholly owned subsidiary of Tidelands Oil & Gas Corporation and was formed in March 2006 to develop a liquefied natural gas (LNG) receiving terminal and ancillary facilities in the offshore waters of Southern California. Esperanza Energy's initiative is to help mitigate California's growing energy needs while remaining committed to best practices from a public safety, community benefit and environmental perspective.

### About Tidelands Oil & Gas Corporation

Tidelands Oil & Gas Corporation, San Antonio, Texas, focuses its business on international pipeline crossings, gas processing plants and gas storage facilities. Through its ten directly and indirectly owned subsidiaries, Tidelands offers a full suite of services and has the capability to satisfy a wide variety of customer needs, both domestically and internationally. For more information about the Company, please visit http://www.tidelandsoilandgas.com.

This press release may be deemed to contain certain forward-looking statements with respect to the Company that are subject to risks and uncertainties that include, but are not limited to those identified in the Company's press releases or discussed from time to time in the Company's Securities and Exchange Commission Filings. Actual results may vary.

SOURCE Esperanza Energy LLC
Web Site: http://www.tidelandsoilandgas.com

Susan Jordan California Coastal Protection Network 906 Garden Street Santa Barbara, CA 93101 805-637-3037

"Our lives begin to end the day we become silent about things that matter." - Martin Luther King, Jr.

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**Press Release** 

Source: Tidelands Oil & Gas Corporation

# Esperanza Energy to Utilize TORP's Environmentally Friendly Technology for Potential Southern California Offshore LNG Receiving Terminal

Wednesday May 3, 1:00 pm ET

LONG BEACH, Calif., May 3 /PRNewswire-FirstCall/ -- Esperanza Energy LLC, a newly formed subsidiary of Tidelands Oil & Gas Corporation (OTC Bulletin Board: <u>TIDE - News</u>), announced today that the company will use TORP Technology's HiLoad in its potential offshore, deepwater Southern California liquefied natural gas (LNG) receiving terminal. TORP's patented HiLoad LNG Regas technology has been developed to enable a safe and cost-efficient unloading and regasification offshore terminal operation.

TORP's HiLoad LNG Regas unit is a floating L-shaped LNG transfer and regasification unit that docks directly onto a LNG carrier, eliminating any relative motion between the carrier and the terminal, which enhances LNG transfer reliability and safety. The HiLoad facility attaches to an LNG tanker, directly vaporizes the LNG as it is offloaded and injects natural gas into pipelines that supply the gas markets. TORP's approach eliminates the need for extensive above-ground storage tanks or large marine structures required for berthing and processing. To view a computer simulation of TORP's technology, go to <a href="https://www.torplng.com">www.torplng.com</a> and click on "View Video."

Once the TORP LNG Regasification Terminal efficiently processes the gas from the LNG tanker, the natural gas is distributed through an undersea pipeline that connects with onshore metering stations and transmission pipelines and, ultimately, is ready for use in energy markets.

"We are impressed with TORP's HiLoad LNG regasification technology and have determined its tremendous potential for our business strategies and plans off the coast of Long Beach," stated Michael Ward, Esperanza Energy President. "As we continue with our due diligence to locate a project site off the coast of Long Beach that exceeds California's environmental, public health and safety requirements, we believe that utilizing TORP's HiLoad technology will help Esperanza Energy meet its objectives."

"We are actively consulting with California stakeholders regarding the optimal design and operational configuration of TORP technology that will facilitate this accomplishment," added Ward.

"TORP's HiLoad regasification technology is the result of a dedicated development program over more than four years," added Lars Odeskaug, President of TORP Technology. "We are pleased with Esperanza Energy's commitment to utilize our technology off the Long Beach coast and consider it a breakthrough in the commercialization of this environmentally friendly technology."

### About TORP

TORP Technology AS is a Norwegian company with its U.S. subsidiary, TORP Technology Inc., headquartered in Houston, Texas. TORP has its origins in Remora Holding (a Hitec Industries company). TORP with its affiliates has been involved in offshore engineering and construction since 1985. For more information about the company, please visit <a href="https://www.torplng.com">www.torplng.com</a>.

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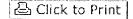
This press release may be deemed to contain certain forward-looking statements with respect to the Company that are subject to risks and uncertainties that include, but are not limited to those identified in the Company's press releases or liscussed from time to time in the Company's Securities and Exchange Commission Filings. Actual results may vary.

Source: Tidelands Oil & Gas Corporation

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### Sempra weighs expansion of Baja LNG plant

By Craig D. Rose UNION-TRIBUNE STAFF WRITER

March 14, 2006

Sempra Energy has completed just 30 percent of the liquefied natural gas terminal it is building near Ensenada in Baja California, but it's already considering expansion.

The San Diego company said it has been approached by customers whose demand would justify a bigger plant, leading the company to open a bidding process that could more than double the terminal's processing capability.

The terminal, dubbed Energia Costa Azul, is currently designed to process about 1 billion cubic feet daily of natural gas, or roughly 15 percent of the gas consumed each day in California. The facility is expected to cost \$800 million and begin processing gas in 2008.

Sempra said it has customers for all of that processing capacity. The possible expansion would increase capacity to 2.5 billion cubic feet daily.

Darcel Hulse, president of Sempra LNG, says Mexican regulations require the company to hold an open bidding process for any additional capacity it might build into the plant, rather than simply allowing the company to sign contracts with any party that approaches it privately.

Hulse said Sempra anticipated possible expansion of the facility by developing a site with room for two additional storage tanks. An expansion to 2.5 billion cubic feet of daily capacity would about double costs of construction, he said.

LNG is natural gas that has been cooled to minus 260 degrees and condensed into a liquid, which reduces by a factor of 600 the amount of space it occupies. The facility under construction will receive gas derived from fields in the Far East and re-gasify the fuel for distribution on North America's west coast.

While there have been dozens of proposals for new LNG terminals in the United States, Sempra and others expect no more than seven or eight new terminals to be built in the next five or six years. In many cases, the terminals face stiff community opposition over fears that they pose hazards from accidents or terrorist acts.

Released from its cold holding tanks and heated to ambient temperatures, natural gas is highly flammable.

Hulse said recent declines in the cost of natural gas haven't shaken the company's view that LNG imports will be needed to make up for shortfalls in domestic supply and will lead to lower prices for consumers.

In addition to the facility in Baja California, Sempra is also building or expanding LNG terminals in Louisiana and Texas.

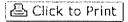
The United States now has record levels of natural gas in storage, the result of what has been an extremely warm winter. Attorneys general from Illinois, Iowa, Wisconsin and Missouri last week charged that natural gas markets are subject to market manipulation and called for further regulation.

In San Diego, Bill Powers, chairman of the Border Power Plant Working Group, said his group continues its legal challenge of state rulings that would allow LNG to be used by California's utilities. Powers said the inherently higher cost of LNG processing will raise costs for consumers.

■Craig Rose: (619) 293-1814; craig.rose@uniontrib.com

### Find this article at:

http://www.signonsandiego.com/news/mexico/20060314-9999-1b14sempra.html



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### STATE SOLAR POWER PROPOSAL GETS OK FROM REGULATORS

David R. Baker, Chronicle Staff Writer <mailto:dbaker@sfchronicle.com> Friday, January 13, 2006

SF Chronicle

California energy regulators placed a \$2.9 billion bet on solar power Thursday, backing a landmark plan that environmentalists hope will become a model for the nation.

The California Public Utilities Commission approved pouring money -drawn from a new charge on utility bills -- into rebates for residents and businesses that install solar panels during the next 11 years. No state in the country currently spends more.

"Our hope is that solar will become a major part of California's energy portfolio," said commission President Michael Peevey. "This solar program simply offers one more alternative to Californians concerned about a clean energy future."

The move, long sought by Gov. Arnold Schwarzenegger, came with the fervent backing of environmentalists -- and some opposition.

Commissioner Geoffrey Brown cast a lone dissenting vote against the program, saying it will raise already-high electric bills. He questioned whether the plan would prove cost-effective in the long run and said the price could swell to \$9 billion if the state approves other, related solar measures. He also noted that many of the program's key details have not yet been hammered out.

"We have put our enthusiasm before our prudence," he said.

Other commissioners, however, argued that the plan will bring California much-needed electricity -- about 3,000 megawatts, equal to the output of five or six power plants -- without increasing carbon dioxide emissions. And because the power will be added one building at a time, it won't require new transmission lines.

"I understand the cost concerns of some, but very frankly, this is the time to be bold," Peevey said.

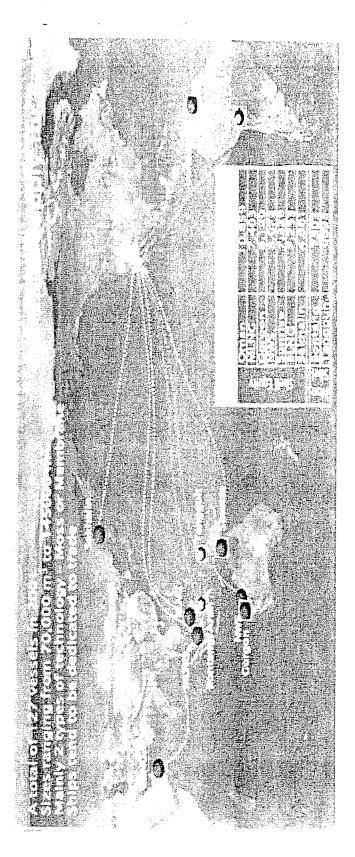
The plan also received a last-minute boost from the commission's newest member, whom Schwarzenegger appointed to the panel late Wednesday. Commissioner Rachelle Chong joined Peevey and Commissioner Dian Grueneich in approving the plan.

Commissioner John Bohn abstained, citing his investments in two companies that design solar power systems.

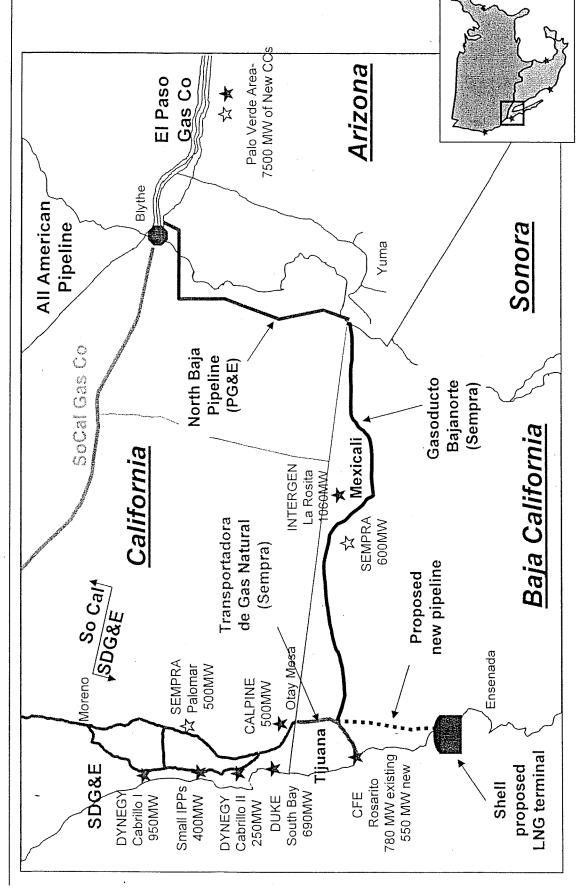
The timing of Chong's arrival spurred speculation among environmentalists that Schwarzenegger needed an extra vote to ensure the plan's passage. A commission spokeswoman, however, said the plan could have passed on just a 2-to-1 vote had Chong's seat been left unfilled. Chong, a former Federal Communications Commission member, also dismissed any link between her appointment and the vote.

# California and Baja California Gas Infrastructure

Presentation to CPUC/CEC Workshop December 10, 2003



Terminal location & Gas infrastructure



★ Power plant existing or under construction

\$



Shell Gas & Power

Expected timeline of the Baja project

	2003	2004	05	90	06 07	08
	4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12				
Design	BDP	Project Spec				
Pipeline Open Season	Bid sig	FTPA Firm signing Transport Agt				
Licence / Permits	MIA CRE Other			3	Commercial	rcial
Terminal Development					Start-up	dr
LNG supply	НОА	SPA	SPA V	SPA		
Gas Sales	HOA	GSA	Ą,			



# What is Needed in California

- Approvals for new and expanded facilities
- Address the relationship between SoCal Gas and SDG&E systems:
- ✓ Is Otay Mesa a receipt point on SDG&E or SoCal Gas system?
- Is delivery of gas into SDG&E system a "bypass" of SoCal Gas system?
- ✓ Does the SoCal Gas "peaking" rate apply?



### Baja California LNG

# Benefits of LNG to California Consumers

- Gas price competition (and competition between supply areas) 梨
- Enhanced gas supply reliability (for SDG&E customers, especially)  $\mathcal{Z}_{\mathbf{z}}$
- Long-term supply assurance
- Increased core gas supply options
- Reduced reliance on interstate pipelines
- Benefits of new LNG supplies justify "rolled-in" cost allocation for new and expanded transmission facilities \*



# Responses to Specific Questions

- Q: Is LNG supply a good fit for electric generation?
- Yes! For the same reasons LNG is a good fit for any other customer
- Are long-term firm LNG supply contracts an appropriate alternative to long-term firm interstate pipeline capacity contracts?
- bundled package of reliable supply and firm pipelines dedicated to the State; LNG is a California's doorstep – delivered through Absolutely! Regasified LNG is gas at transportation



### ALTERNATIVES: SHIPBORNE RE-GASIFICATION OF LNG

### Woodside brags about prospects

By Jamie Freed November 17, 2005 AdvertisementAdvertisement

http://www.smh.com.au/news/business/woodside-brags-about-prospects/2005/11/16/1132016860175.html?oneclick=true#

Senior executives of Woodside Petroleum were keen to highlight its strong production growth profile in both oil and liquefied natural gas at its annual investor briefing in Sydney yesterday.

While Woodside raised this year's production target slightly to 59 million barrels of oil equivalent (boe) from the 58 million boe guidance released in August, it noted 2006 production would rise 30 per cent as new projects came on stream.

And Woodside LNG sales from the planned Pluto and Browse projects off the coast of Western Australia could come from an unexpected place: the US east coast.

Although it takes 57 days for a tanker round-trip to LNG import terminals in Massachusetts or Louisiana versus a 20-day round-trip to Japan or 40 days to California, growing US natural gas demand has opened up a new market for gas from those developments. Pluto should deliver its first production in 2011, with Browse beginning to sell LNG from 2011 at the earliest and 2014 at the latest.

"Australia is very clearly on the radar of many US LNG buyers," gas marketing director Reinhardt Matisons told analysts and institutional investors. Woodside had already received approaches from buyers on the US east coast.

And despite pulling out of a deal with Crystal Energy in the US to develop a Californian LNG import terminal earlier this year, Woodside chief executive Don Voelte emphasised the company had not abandoned the growing US west coast market.

Opposition from environmentalists to both Crystal's Clearwater Port plan and the rival Cabrillo Port plan by BHP Billiton meant Woodside was now looking at different options for getting gas to California.

Mr Voelte said yesterday that reheating the gas on dedicated tankers and piping it directly to land rather than first routing it through an offshore terminal was a possibility.

This could help allay concerns about a terminal being a terrorist target or marring the view of wealthy homeowners.

But despite looking to the US market for growth, Mr Voelte said the Japanese were still key customers and smart about buying gas ahead of time through long-term contracts rather than from spot shipments as with the US market.

He said one of the best decisions Woodside made this year was to approve the development of the North-West Shelf's fifth production train with its joint venture partners without having first sold the gas through long-term contracts as had been done in the past.

Mr Voelte hinted that new sales contracts could be announced within the next few weeks.

## Development Plan for the Phased Expansion of

# Electric Power Transmission Facilities in the

### Tehachapi Wind Resource Area

## **Second Report**

of the.

# Tehachapi Collaborative Study Group

California Public Utilities
Commission

OII 05-09-005 OII 00-11-001 **April 19, 2006**  The report is printed in 5 volumes or electronic files:

Volume 1 contains the Second Report;

Volume 2 contains Study Plan #2 the basis for the Second Report (referred to in the Report as Appendix 1);

Volume 3 contains the PG&E Studies (referred to as Appendix 2);

Volume 4 contains the SCE Studies (referred to as Appendix 3);

Volume 5 contains the CAISO Studies and all remaining Appendices 5, 6 and 7.

### Development Plan for the Phased Expansion of

# Transmission in the Tehachapi Wind Resource Area Second Report of the Tehachapi Collaborative Study Group

EXECUTIVE SUMMARY	6
Summary of Recommendations	13
CHAPTER 1	
INTRODUCTION	15
Background	
The Tehachapi Collaborative Study Group (TCSG)	15
The March 16, 2005 Report	15
Start of Second TCSG Study	17
Study Plan # 2	17
CHAPTER 2	19
PROCESS TO EVALUATE ALTERNATIVES	19
2.1 Introduction	19
2.2 Calculation of Project Cost	19
2.3 Elements of Economic Evaluation	19
2.4 Study Scenarios	20
2.5 Results	21
TABLE 2.1	
COST COMPONENTS OF TRANSMISSION ALTERNATIVES	23
CHAPTER 3	
PRODUCTION SIMULATION STUDIES BY CAISO	32
3.1 Background	
3.2 Study Scenarios Descriptions	
Table 3.1: Study Scenarios Reviewed	
3.3 Local Area Transmission Interfaces	
RESULTS	
3.4 Annual Production Costs	
Table 3.2 – Summary of WECC Results	36
Table 3.3 - Comparison of Incremental Annual Cost Differences	
3.5 With and Without North of Midway Reinforcement	39
Table 3.4 - North of Midway Reinforcement Annual Savings	40
4500 MW Incremental Tehachapi Wind Output	40
3.6 Helms Pumped Storage Coordination with Tehachapi Wind	40
3.7 Fresno 230 kV Tie Operation	
3.8 Distribution of Tehachapi Wind	41
CHAPTER 4: POWER FLOW STUDIES AND FACILITY COST STUDIES	
4.1 PG&E Transmission Alternatives	44
Table 4.1.1 Summary of Conceptual Transmission Plan and Planning Le	evel Cost
Estimates for PG&E Alternative 2 (see Figure 4.1.2)	45

Table 4.1.2 Summary of Conceptual Transmission Plan and Planning Level Co	act
Estimates <sup>1</sup> for PG&E Alternatives 1, 4 and 5	
4.1.1 PG&E Alternative 1: Status quo.	
4.1.2 PG&E Alternative 2: Fresno 230 kV Phase-Shifted Tie:	
4.1.2 PG&E Alternative 4: Tesla – Los Banos - Midway 500 kV line	
J	
$\mathcal{O}$	
Figure 4.1.1 - PG&E Existing System Figure 4.1.2 - PG&E Alternative 2: Fresno 230 kV Tie	52
Figure 4.1.3 - PG&E Alternative 4: Tesla - Los Banos - Midway 500 kV line	
Figure 4.1.4 - PG&E Alternative 5: Tesla - Gregg - Midway 500 kV line	
4.2 Southern California Edison Studies	
Table 4.2.1 Summary of Conceptual Transmission Plan and Planning Level Co	
Estimates for SCE	
Figure 4.2.1 Tehachapi Conceptual Transmission Plan Phase 1	
Figure 4.2.2 Tehachapi Conceptual Transmission Plan Phase 2	
Figure 4.2.3 Tehachapi Conceptual Transmission Plan Phase 3	
Figure 4.2.4 Midway-Tehachapi 500 kV Transmission Line	
Figure 4.2.5 Vincent-Tehachapi 500 kV Transmission Line	64
CHAPTER 565	
Operations Analysis of 5,200 MW of Wind Generation in the Tehachapi Area	
5.1 Introduction and Background	
5.2 Market Issues	
5.3 Operational Issues	
CHAPTER 6	
RECOMMENDED FACILITIES FOR EACH PHASE OF DEVELOPMENT	<del></del> -
6.1 Key Considerations for Connecting Tehachapi to the Grid	
Figure 6.1	
6.2 Phase 1: First 500 kV Connection to Southern California	
Figure 6.2. Phase 1 Upgrades	
6.3 Phase 2A: Antelope to Substation No. 5	
6.4 Phase 2B: Network Upgrades of the SCE System	
Figure 6.3. Phase 2 Upgrades	
6.5 Alternatives for the Second and Third Tehachapi Connections	
Figure 6.4. Expanded Path 26 Option Figure 6.5. Gen-tie Option	
6.6 Phase 3: Second 500 kV Connection to the Grid	
Figure 6.6. Phase 3 Upgrades	
6.7 Phase 4: Possible Third 500 kV Connection to the Grid	
6.8 4,000 MW from Tehachapi Over Two Circuits	87
Figure 6.7. Phase 4 Upgrades, Expanded Path 26	
Figure 6.8. Phase 4 Upgrades, Gen-Tie Option	90
CHAPTER 791	
POLICY AND IMPLEMENTATION ISSUES91	
COST RECOVERY ISSUES91	
7.1 The Uniqueness of Tehachapi: Why Advance Assurance of Cost Recover	
7.1 The Uniqueness of Tehachapi: Why Advance Assurance of Cost Recover Required	
· · · · · · · · · · · · · · · · · · ·	
· · · · · · · · · · · · · · · · · · ·	

	7.2 The Source of Assurance of Cost Recovery: P.H. Code Section 399.25	0.5
	or resolutions of cost recovery. T.O. code section 599.25	92
	7.3 Cost Recovery Recommendations	
-	7.5 POLICY ISSUES ASSOCIATED WITH THE EXISTING CPUC PERMITTING	
	PROCESS AND STREAMLINING98	•
	7.6 A PROJECT MANAGEMENT APPROACH TO TEHACHAPI DEVELOPMENT103	
	7.6.1 CPUC Project Manager	104
	7.6.2 CEQA Considerations of the Project Management Approach	105
	7.6.3 The Tehachapi Power Project	105
	CHAPTER 8107	
	CONCEPTUAL SCHEDULE FOR COMPLETING TEHACHAPI PLAN & NECESSARY	
	RELATED ACTIONS107  8.1 Updated Conceptual Schedule	105
	Γ	107
	Recommendations:	
	Recommendations:  8.2 Actions Necessary in Every Phase to Complete Construction By 2010	108
	8.2 Actions Necessary in Every Phase to Complete Construction By 2010	. 109
	<ul><li>8.2 Actions Necessary in Every Phase to Complete Construction By 2010</li><li>8.3 Post-CPUC Permitting Resource Agency and Local Permitting</li></ul>	. 109 . 110
	<ul> <li>8.2 Actions Necessary in Every Phase to Complete Construction By 2010</li> <li>8.3 Post-CPUC Permitting Resource Agency and Local Permitting</li> <li>8.4 Specific Actions That Must Be Taken to Accelerate Particular Phases</li> </ul>	. 109 . 110 . 111
	<ul> <li>8.2 Actions Necessary in Every Phase to Complete Construction By 2010</li> <li>8.3 Post-CPUC Permitting Resource Agency and Local Permitting</li> <li>8.4 Specific Actions That Must Be Taken to Accelerate Particular Phases</li> <li>8.5 Proactive Finding of Need for Phases 2 and 3</li> <li>FIG. 8.1 SCHEDULE TO 2011</li> </ul>	. 109 . 110 . 111 . 113 . 116
·	<ul> <li>8.2 Actions Necessary in Every Phase to Complete Construction By 2010</li> <li>8.3 Post-CPUC Permitting Resource Agency and Local Permitting</li> <li>8.4 Specific Actions That Must Be Taken to Accelerate Particular Phases</li> <li>8.5 Proactive Finding of Need for Phases 2 and 3</li> <li>FIG. 8.1 SCHEDULE TO 2011</li> <li>FIG. 8.2 SCHEDULE TO 2010</li> </ul>	. 109 . 110 . 111 . 113 . 116 . 117
·	<ul> <li>8.2 Actions Necessary in Every Phase to Complete Construction By 2010</li> <li>8.3 Post-CPUC Permitting Resource Agency and Local Permitting</li> <li>8.4 Specific Actions That Must Be Taken to Accelerate Particular Phases</li> <li>8.5 Proactive Finding of Need for Phases 2 and 3</li> <li>FIG. 8.1 SCHEDULE TO 2011</li> </ul>	. 109 . 110 . 111 . 113 . 116 . 117
	<ul> <li>8.2 Actions Necessary in Every Phase to Complete Construction By 2010</li> <li>8.3 Post-CPUC Permitting Resource Agency and Local Permitting</li> <li>8.4 Specific Actions That Must Be Taken to Accelerate Particular Phases</li> <li>8.5 Proactive Finding of Need for Phases 2 and 3</li> <li>FIG. 8.1 SCHEDULE TO 2011</li> <li>FIG. 8.2 SCHEDULE TO 2010</li> </ul>	. 109 . 110 . 111 . 113 . 116 . 117
·	<ul> <li>8.2 Actions Necessary in Every Phase to Complete Construction By 2010</li> <li>8.3 Post-CPUC Permitting Resource Agency and Local Permitting</li> <li>8.4 Specific Actions That Must Be Taken to Accelerate Particular Phases</li> <li>8.5 Proactive Finding of Need for Phases 2 and 3</li> <li>FIG. 8.1 SCHEDULE TO 2011</li> <li>FIG. 8.2 SCHEDULE TO 2010</li> </ul>	. 109 . 110 . 111 . 113 . 116 . 117
	<ul> <li>8.2 Actions Necessary in Every Phase to Complete Construction By 2010</li> <li>8.3 Post-CPUC Permitting Resource Agency and Local Permitting</li> <li>8.4 Specific Actions That Must Be Taken to Accelerate Particular Phases</li> <li>8.5 Proactive Finding of Need for Phases 2 and 3</li> <li>FIG. 8.1 SCHEDULE TO 2011</li> <li>FIG. 8.2 SCHEDULE TO 2010</li> </ul>	. 109 . 110 . 111 . 113 . 116 . 117
	<ul> <li>8.2 Actions Necessary in Every Phase to Complete Construction By 2010</li> <li>8.3 Post-CPUC Permitting Resource Agency and Local Permitting</li> <li>8.4 Specific Actions That Must Be Taken to Accelerate Particular Phases</li> <li>8.5 Proactive Finding of Need for Phases 2 and 3</li> <li>FIG. 8.1 SCHEDULE TO 2011</li> <li>FIG. 8.2 SCHEDULE TO 2010</li> </ul>	. 109 . 110 . 111 . 113 . 116 . 117
	<ul> <li>8.2 Actions Necessary in Every Phase to Complete Construction By 2010</li> <li>8.3 Post-CPUC Permitting Resource Agency and Local Permitting</li> <li>8.4 Specific Actions That Must Be Taken to Accelerate Particular Phases</li> <li>8.5 Proactive Finding of Need for Phases 2 and 3</li> <li>FIG. 8.1 SCHEDULE TO 2011</li> <li>FIG. 8.2 SCHEDULE TO 2010</li> </ul>	. 109 . 110 . 111 . 113 . 116 . 117
	<ul> <li>8.2 Actions Necessary in Every Phase to Complete Construction By 2010</li> <li>8.3 Post-CPUC Permitting Resource Agency and Local Permitting</li> <li>8.4 Specific Actions That Must Be Taken to Accelerate Particular Phases</li> <li>8.5 Proactive Finding of Need for Phases 2 and 3</li> <li>FIG. 8.1 SCHEDULE TO 2011</li> <li>FIG. 8.2 SCHEDULE TO 2010</li> </ul>	. 109 . 110 . 111 . 113 . 116 . 117
	<ul> <li>8.2 Actions Necessary in Every Phase to Complete Construction By 2010</li> <li>8.3 Post-CPUC Permitting Resource Agency and Local Permitting</li> <li>8.4 Specific Actions That Must Be Taken to Accelerate Particular Phases</li> <li>8.5 Proactive Finding of Need for Phases 2 and 3</li> <li>FIG. 8.1 SCHEDULE TO 2011</li> <li>FIG. 8.2 SCHEDULE TO 2010</li> <li>FIG. 8.3 CAISO Queue March 17, 2006</li> </ul>	. 109 . 110 . 111 . 113 . 116 . 117 . 118
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### The Tehachapi Wind Energy Project "Transmitting Tehachapi Energy to Consumers"

Second Report
To the California Public Utilities Commission
From the
Tehachapi Collaborative Study Group
April 19, 2006

### **Executive Summary**

### Introduction

When completed, the Tehachapi Wind Energy Project will capture large amounts of energy from the wind, transform it into electric energy and transmit this electricity to California consumers. In the next few years, thousands of modern wind turbines clustered in wind "farms" spread over more than one thousand square miles will be built in the Tehachapi region. The Tehachapi Project is expected to provide enough electric energy to satisfy the needs of nearly 2 million California homes. If developed to the extent forecast, it will produce more electrical power than any other generation project in California and supply about 5% of California's total electricity needs.

The infrastructure that comprises the Tehachapi Project consists of three essential components - the wind turbines themselves; power lines and equipment to collect electricity from turbines in the local area; and high voltage transmission facilities to reliably interconnect the wind generation with the existing California electricity grid and distribute this power to California consumers.

Permit applications for the initial transmission components of the Tehachapi Project already have been submitted to the CPUC and environmental reviews of these facilities are now underway. In addition, wind generation projects comprising more than half of the total expected project capacity have been submitted to the California Independent System Operator (CAISO) for interconnection studies. However, these projects require transmission facilities to be constructed to enable the electricity generated to reach consumers. Private investment is expected to provide the capital required for the project, estimated at \$8 - \$9 billion. Approximately \$1 billion of that total represents the estimated cost of transmission facilities needed to connect the Tehachapi Project to the grid. The overall project cannot proceed until the CPUC establishes the mechanism by which the recovery of the \$1 billion of transmission investments will be assured.

In Decision 04-06-010 (June 9, 2004), the California Public Utilities Commission (CPUC) requested that the Tehachapi Collaborative Study Group (TCSG) devise a

comprehensive plan for the transmission lines, major substations, and other transmission infrastructure needed for the project. The first Preliminary Report from the TCSG was submitted to the Commission in March, 2005.¹ That report identified a number of alternatives for the transmission infrastructure and recommended further study to select the best among them. This second report narrows and refines the alternatives submitted last year and makes further recommendations to complete the planning process and facilitate detailed technical studies, approval and construction of the transmission facilities needed for the Tehachapi Project.

### Achieving Tehachapi Transmission Planning Goals

The primary goal of the TCSG is to devise a conceptual transmission plan that would allow the wind generation potential in Tehachapi, currently estimated at 4,500 MW, to reach California consumers.<sup>2</sup> The TCSG has consensus agreement on the transmission facilities to provide access for approximately 3,000 MW, and has identified two main alternatives for providing access for the remaining 1,500 MW.

The TCSG also has the goal of providing its recommendations to the CPUC on a schedule that facilitates permitting and construction of needed facilities by 2010. Prior to the beginning of the TCSG process, Southern California Edison Company's (SCE) expert analysis had identified transmission facilities for initial phases of the Tehachapi plan. In its 2005 report, the TCSG agreed with SCE's recommendations which it referred to as Phases 1 and 2. Construction of these facilities is expected to accommodate about 1,600 MW of Tehachapi generation. Permitting is underway for the first 700 MW (Phase 1) of these facilities.

However, certificates of Public Convenience and Necessity (CPCN) for initial Phase 1 facilities have not yet been issued, and CPCN applications have not been filed for subsequent phases. As discussed below, the TCSG urges the CPUC to accelerate its permitting process in order to achieve the state's renewable energy goals.

Of the expected 4,500 MW of incremental capacity in the Tehachapi WRA, interconnection requests for Tehachapi wind projects totaling approximately 3,600 MW have already been submitted to the CAISO. In light of this, the TCSG believes that this indicates that transmission facilities to connect an additional 4,500 MW of Tehachapi generation are likely to be needed.

The TCSG believes that in developing a transmission plan for Tehachapi area generation, consideration should be given to a plan's potential to provide benefits to the State's transmission network, if possible, in addition to providing full grid access to potential Tehachapi wind generation. As discussed below, facilities being considered may provide network benefits and/or may negatively impact grid

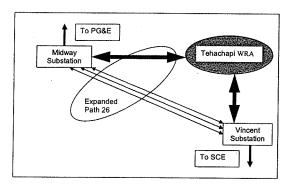
Report of the Tehachapi Collaborative Study Group, March 16, 2005

<sup>&</sup>lt;sup>2</sup> The California Energy Commission provided the estimate of 4,500 MW of potential wind development in Tehachapi and nearby Antelope Valley, and the TCSG has used that value for planning purposes. As of this report, projects totaling approximately 3,600 MW have been submitted to the ISO for interconnection approval, despite the lack of transmission access at the present time. Some observers believe eventual total wind generation in Tehachapi may be significantly larger than 4,500 MW.

performance. Assessment and quantification of the potential network benefits and potential operational challenges will require additional assistance from the CAISO. In order to properly evaluate remaining alternatives, the TCSG therefore recommends that further Tehachapi transmission analysis be conducted under the auspices of the CAISO. The planning process also should determine which facilities of the final two phases (Phases 3 and 4) should be constructed first.<sup>3</sup>

### Connecting the Tehachapi Wind Resource Area (WRA) to the California Grid

The Tehachapi WRA lies at the southern end of the San Joaquin Valley in the mountainous region between Bakersfield and Mohave. Transmission connections between Tehachapi and the existing grid can be made to the west at the Midway substation near Buttonwillow and to the south at the Vincent substation near Lancaster. Three existing transmission lines connect the Midway and Vincent substations, collectively referred to as Path 26.



Power lines from Tehachapi can connect at Midway, at Vincent, or at both substations.<sup>5</sup> The TCSG has considered two connection alternatives in detail, as described in Chapter 6. The first alternative connects Tehachapi at both Midway and Vincent as shown in Figure 1. The other alternative connects Tehachapi only at Vincent as shown in Figure 2.

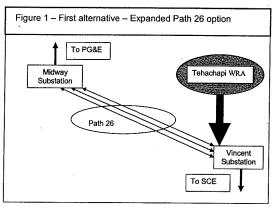


Figure 2 – Second alternative – Gen-tie option

Permit applications have been filed for the first transmission components which will connect Tehachapi to the Vincent substation with one 500 kV line. Two more 500 kV lines are expected to be needed to export 4,500 MW of wind power from the Tehachapi WRA to the existing state grid.<sup>6</sup>

A detailed comparison of the two alternatives is found in Chapter 6. Costs for the two plans are comparable, estimated to be in the neighborhood of \$1 billion. A choice between

<sup>&</sup>lt;sup>3</sup> The phases identified in the 2005 TCSG report were for organizational purposes and did not imply that the Phase 3 facilities should necessarily be constructed prior to those discussed in Phase 4.

<sup>&</sup>lt;sup>4</sup> This is a simplified description of the transmission connections. Other facilities and connections to the grid have been examined by the TCSG and are described in detail in Chapters 2 and 6.

<sup>&</sup>lt;sup>5</sup> The two options discussed here appear to be the most likely alternatives among those studied by the TCSG, but connections to other points may be considered by the ISO. See Chapter 2 for complete description of facilities and connections considered by the TCSG.

<sup>&</sup>lt;sup>6</sup> For planning purposes, the TCSG assumes that all three of these lines will be operated by the investor owned utilities. However, there are also power lines in the region owned by the Los Angeles Department of Water and Power and by a private company. If substantial amounts of Tehachapi energy were to be transmitted on these lines, a third IOU line from Tehachapi might not be needed.

the two alternatives hinges on benefits of each plan that the TCSG has not yet been able to quantify.

The salient feature of the alternative involving a new Midway – Tehachapi 500 kV line is that it comprises an additional link in Path 26, the major transmission artery connecting Northern and Southern California. The TCSG refers to this alternative as the Expanded Path 26 option. This configuration is expected to be considered a "network facility" which would provide two important benefits to the California grid, namely additional reliability, operating flexibility and additional import capacity into Southern California<sup>7</sup> when Tehachapi generation is low.<sup>8</sup>

The Expanded Path 26 option could complicate grid management, however, since some power from Tehachapi would flow on existing Path 26 lines and use some of the path transfer capacity. This could complicate grid operations as operators must consider these variable flows when scheduling power into Path 26.

The second alternative would provide Tehachapi with access to the grid only at the Vincent substation. In this option, all three of the 500 kV lines necessary to export Tehachapi power would extend south from Tehachapi. Providing access to Tehachapi wind power would be the primary benefit of this alternative. Power lines which serve only to connect generation to the grid are referred to a "gen-ties", and the TCSG calls this plan the "Gen-tie option". The feasibility of constructing a third 500 kV line from the Tehachapi area to Vincent in the Gen-tie option may be complicated, however, due to the rapid urbanization of the Antelope Valley which lies between the Tehachapi and Vincent substations.

The TCSG supports the Commission's February 26, 2006, resolution to immediately pursue further environmental, engineering, cost, operational, regulatory, and other necessary studies that are needed to construct all the transmission facilities included in planning Phases 1, 2 and 3 of the 2005 report.

Resolution of the above issues related to reliability, grid operations, network benefits and costs will require the active assistance of the CAISO. The TCSG therefore recommends the following:

### Recommendation #1

The TCSG recommends that additional study of all Phase 3 and 4 alternatives discussed herein be conducted expeditiously under the auspices of the CAISO in a forum that is open and collaborative, similar to the TCSG process to date.

Additional transmission facilities will be needed to transmit power to the SDG&E system.

<sup>&</sup>lt;sup>8</sup> A frequent criticism of wind power is that "the wind doesn't blow all the time." A transmission plan that enables additional power transfers during periods of low wind generation would allow the CAISO to manage the variability of wind generation more easily.

<sup>&</sup>lt;sup>9</sup> This is a simplified description. As described in Chapter 6, SCE's Antelope substation lies between Tehachapi and Vincent. Power exported south from Tehachapi might enter the grid either at Antelope or at Vincent substations.

### Financial and Cost Recovery considerations

The Tehachapi Project will require investment of substantial amounts of capital, estimated to be in the neighborhood of \$8-\$9 billion for the entire project. Transmission facilities in either of the options discussed above will require approximately \$1 billion. No debt is expected to be incurred by the state for the Tehachapi Project; all of this capital is expected to come from private sources. In order to attract the required capital for the transmission facilities, however, the mechanism through which the investment will be repaid by electricity consumers must be firmly established.

The TCSG emphasizes that cost recovery issues are of utmost importance and must be resolved in order for the Tehachapi project to proceed, as further discussed in Chapter 7. The TCSG therefore recommends:

### TCSG Recommendation #2

The TCSG urges the Commission to adopt a decision implementing the provisions of P.U. Code §399.25, by May, 2006, as scheduled in I.05-09-005, and ensure that all utility investments related to construction of Tehachapi transmission facilities will be recovered.

### Streamlining CPUC Transmission siting and permitting process.

In the I.05-09-005 proceeding, the utilities and other Parties have raised issues over the existing CPUC transmission permitting process. In response to these concerns, the CPUC developed preliminary recommendations and conducted a workshop on March 23, 2006 for further comments. The next step would be to implement streamlining measures that would facilitate transmission for renewables.

### TCSG Recommendation #3

TCSG urges the CPUC to consider and implement recommended streamlining approaches to the existing CPUC transmission permitting process.

### Summary of the TCSG Cost/Benefit Analysis

Economic evaluation of the transmission options is discussed in Chapter 2. Chapter 3 describes the CAISO cost analysis. Cost estimates for each of the facilities considered were obtained from Pacific Gas & Electric and Southern California Edison. The TCSG emphasizes that these estimates are preliminary. Facilities selected for construction will require further study in order to obtain firm estimates which will be conducted as part of the CPCN application process.

The CAISO provided the TCSG with its analysis of the various transmission options using production cost simulation computer modeling. The model dispatches the least

cost generation facilities throughout the Western Interconnection (WECC) that are required to meet projected loads, consistent with projected transmission system capabilities. The analysis modeled Tehachapi wind power as a must-take resource similar to Qualifying Facilities, such that all of the incremental 4,500 MW plus the 700 MW of existing Tehachapi power is part of this generation mix.

Each transmission option considered by the TCSG changes the overall Western transmission system and therefore also changes the mix of dispatchable generation facilities chosen by the computer model. The model calculates the annual electricity production cost of the entire WECC for each option, and the difference between the annual production costs for each of the Tehachapi options studied provides a measure of the relative benefits.

For example, if WECC annual production cost for the transmission system with one choice of Tehachapi transmission facilities is \$15 billion compared to \$15.1 billion for another, the first choice is presumed to have benefits of lower cost relative to the second of \$0.1 billion (\$100 million) per year. For each alternative under consideration, the revenue requirement associated with the capital costs was calculated and added to the present value of the WECC production costs and operations and maintenance (O & M) costs over 50 years to arrive at an overall economic assessment of the alternative. Each of the major options, together with the costs, is shown in Chapter 2, Table 2.1.

### Other facilities considered by the TCSG

As previously reported to the Commission, the TCSG considered a number of other transmission facilities. At the time of that preliminary report, several transmission options in addition to those described above had not been adequately evaluated due to the limited information available. The TCSG now believes it has sufficient information to exclude these options from further consideration as part of the Tehachapi Project.

The transmission lines that carry power north from the Midway substation are known as Path 15. With either of the transmission options described above, power flows on Path 15 are expected to be at the path limit for many hours during the year. That is, Path 15 is expected be "congested" some of the time<sup>10</sup>, even though the capacity of Path 15 was recently expanded. The TCSG considered a variety of facilities that would reduce congestion on Path 15 that are expected to occur when the Tehachapi Project is connected to the grid.

As discussed in Chapter 3, the CAISO provided the TCSG with the results of its production simulations for all of the options considered. After weighing the costs of congestion on Path 15 against the cost of facilities that would relieve the congestion,

<sup>&</sup>lt;sup>10</sup> Predominantly when power flows north of Midway are from South to North (primarily during off-peak hours).

the TCSG concluded that on this basis, these facilities are not cost effective additions to the grid at the present time for the sole purpose of delivering Tehachapi wind energy to Northern California load centers. However, analysis of their network benefits may suggest that they be reconsidered in the future.

Additional transmission facilities in northern California may be desirable for a variety of other economic and/or reliability reasons about which the TCSG has no information. The CAISO will determine all necessary interconnection-related upgrades required in accordance with Federal Energy Regulatory Commission (FERC) interconnection policy.

Another transmission facility examined by the TCSG at considerable length is described in Appendix 5. This facility, referred to by the TCSG as the "Fresno 230 kV Tie", would connect the Pacific Gas & Electric (PG&E) system to the Southern California Edison (SCE) Big Creek lines near Fresno. As described in the report, the Fresno 230 kV Tie facilities would allow a fraction of the electricity generated by the Tehachapi Project to bypass Path 15 and enter the PG&E system near Fresno, thereby reducing congestion on Path 15. As with other facilities in Northern California, the TCSG concluded that the Fresno 230 kV Tie is not a cost effective addition to the grid for the sole purpose of transmitting power from the Tehachapi Project to northern California load centers.

### Project Manager for Tehachapi

A project manager should be appointed to expedite implementation of the Tehachapi transmission infrastructure as explained in Section 7.4, below. Accordingly, the TCSG makes the following recommendation.

### Recommendation # 4

The CPUC should work with the CEC, the legislature and key stakeholders to identify candidates for the position of Tehachapi Power Project manager. The project manager would engage stakeholders to establish a schedule for project implementation and work plan addressing every element of the transmission and generation development. The project manager would report progress to state agencies, stakeholders and the public quarterly.

### Accelerating the Schedule

The March 2005 Report of the TCSG included a conceptual schedule for completing the Tehachapi transmission upgrades by December 2010. The 2005 schedule assumed that the CPCN applications for Phase 1 would be processed and approved by June 2006. It now appears that various delays in the CPCN approval process will cause those applications to be approved no earlier than December 2006. Although the 2005 conceptual schedule was described as "the fastest practicable schedule" for completing the plan by 2010, and time has been lost since, the TCSG believes that it may still possible to meet the 2010 completion goal if <u>all</u> of a number of aggressive

actions to accelerate the process, fully described in chapter 8 and summarized briefly below, are taken.

The TCSG emphasizes the critical importance of completing Segments 1 and 2 of Phase 1 as soon as possible. These segments must be completed before Phase 2 construction can commence. Phase 2 is essential for all projects because they require the additional south-of-Antelope transmission capacity that this phase will provide.

### Recommendations:

- Accelerate the CPCN review process for the Tehachapi upgrades by taking all of the specific actions described in Chapter 8;
- Direct the Energy Division, utilities and other TCSG parties to develop a
  detailed schedule of specific tasks and parties responsible (the "who,
  what, when") that must be achieved if the larger milestones shown in
  Chart 8.2 are to be met (moving the schedule back if it is determined in
  this process that the 2010 completion goal is infeasible);
- Direct the Energy Division to work with SCE to ensure that complete CPCN applications for Phases 2 and 3 be filed as soon as possible;
- Expedite the CPCN approval process for future phases by proposing, on the Commission's own motion, without evidentiary hearings, a finding that Phases 2 and 3 are needed to facilitate the achievement of RPS goals.

### Summary of Recommendations

### Recommendation #1

The TCSG recommends that additional study of all Phase 3 and 4 alternatives discussed herein be conducted expeditiously under the auspices of the CAISO in a forum that is open and collaborative, similar to the TCSG process to date.

### TCSG Recommendation #2

The TCSG urges the Commission to adopt a decision implementing the provisions of P.U. Code §399.25, by May, 2006, as scheduled in I.05-09-005, and ensure that all utility investments related to construction of Tehachapi transmission facilities will be recovered.

### Recommendation #3

TCSG urges the CPUC to consider and implement recommended streamlining approaches to the existing CPUC transmission permitting process.

### Recommendation #4

The CPUC should work with the CEC, the legislature and key stakeholders to identify candidates for the position of Tehachapi Power Project manager. The project manager would engage stakeholders to establish a schedule for project implementation and work plan addressing every element of the transmission and generation development. The project manager would report progress to state agencies, stakeholders and the public quarterly.

### Recommendation # 5

All aggressive actions to complete the Tehachapi transmission upgrades by December 2010 should be taken now. It is critical to complete Segments 1 and 2 of Phase 1 as soon as possible because they must be completed before Phase 2 construction can commence. Phase 2 is essential for all projects because they require the additional south-of-Antelope transmission capacity that this phase will provide.